

Neue und interessante Milben  
aus dem Genfer Museum LVIII.  
Some primitive Oribatids  
from the Cape Verde Islands  
(Acari: Oribatida)

by

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With 19 figures

ABSTRACT

**New and interesting mites from the Geneva Museum LVIII. Some primitive Oribatids from the Cape Verde Islands (Acari: Oribatida).** — In the course of examining soil samples originating from Cape Verde Islands 7 Oribatid species were identified. Four of them proved to be new to science.

INTRODUCTION

I am not aware of any publication treating the soil mite fauna of Cape Verde Islands. The situation of the islands suggests that there might be some affinity between their fauna and the fauna of West Africa. The material collected by Mr. A. van Harten is very interesting because it does not unequivocally support the above hypothesis, but indicates much more relations to the fauna of the Palaearctic region.

The first survey already yielded four new species out of the seven identified, and interestingly enough the genera are all known from the Palaearctic region, too. The three known species are likewise Palaearctic and are not known from the Ethiopian region.

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Herewith I should like to thank Dr. B. Hauser and Dr. C. Lienhard for giving me the opportunity to study this very interesting material deposited in the Museum d'Histoire naturelle, Geneva.

#### LIST OF LOCALITIES

- No. 83 — Republica de Cabo Verde: Ile S. Tiago: Sao Jorge, litière, juillet 1982, leg. A. van Harten (extraction par appareil Berlese).  
 No. 115 — idem, août 1982.  
 No. 164 — idem, septembre 1982.

#### LIST OF IDENTIFIED SPECIES

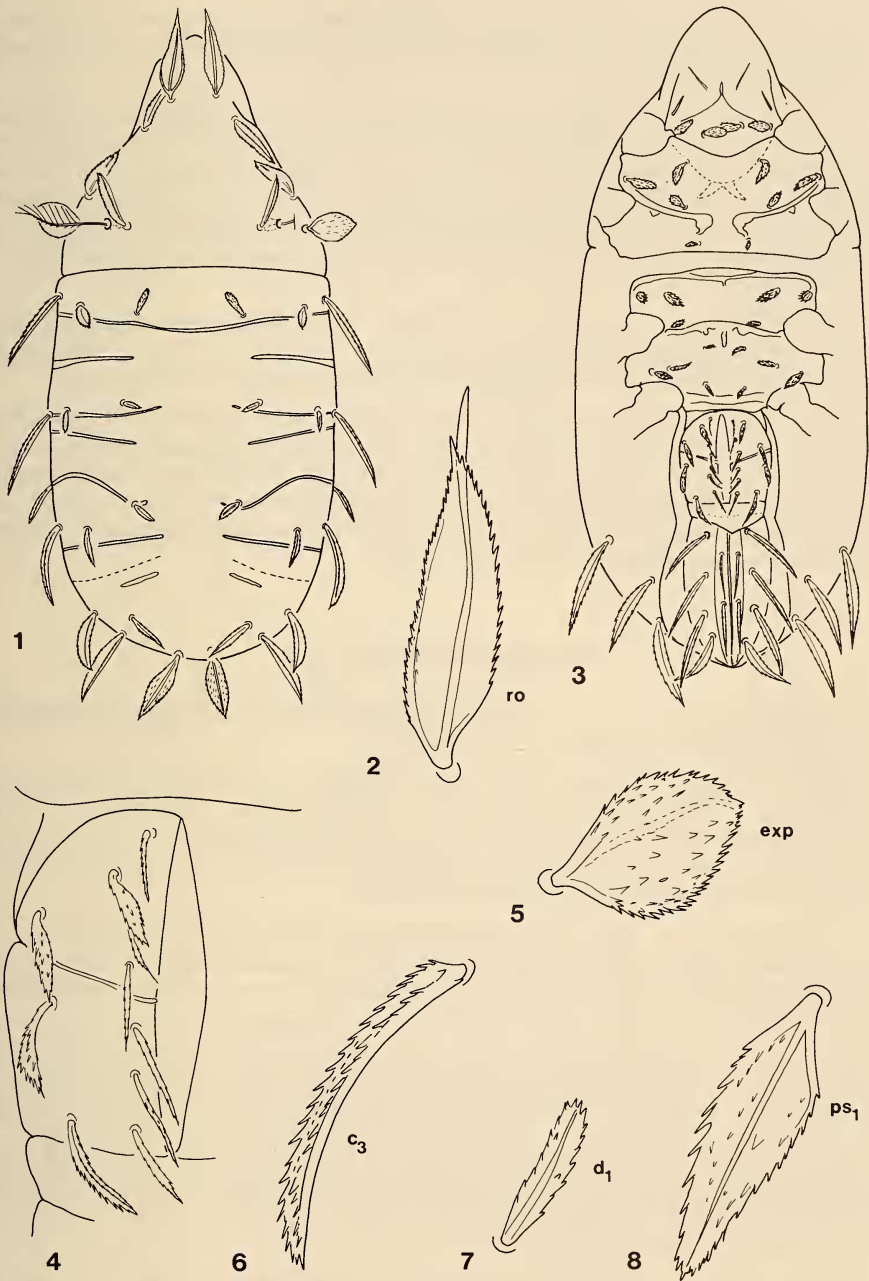
- Ctenacarus araneola* (Grandjean, 1932)  
 Locality: No. 83: 16 specimens.  
*Sphaerochthonius splendidus* (Berlese, 1904)  
 Locality: No. 83: 25 specimens.  
*Lohmannia vanharteni* sp. n.  
 Locality: No. 164.  
*Hoplophorella lienhardi* sp. n.  
 Localities: No. 115; No. 164.  
*Hoplophorella ligulifera* sp. n.  
 Localities: No. 83; No. 115.  
*Indotritia septentrionalis* sp. n.  
 Locality: No. 115.  
*Trhypochthoniellus excavatus* (Willman, 1919)  
 Locality: No. 115: 11 specimens.

#### DESCRIPTION OF THE SPECIES

##### ***Lohmannia vanharteni* sp. n.**

**M e a s u r e m e n t s .** — Length: 1028-1036  $\mu\text{m}$ , width: 461-470  $\mu\text{m}$ .

**D o r s a l s i d e** (Fig. 1): Rostrum rounded, rostral setae large, with long, sharply pointed end (Fig. 2). The other prodorsal setae also phylliform, but much smaller, setae *exp* wide, nearly round, all with serrated margin. Notogastral setae different in shape and size, but all phylliform. Setae  $c_1$ ,  $d_1$  and  $e_1$  very small and short. Setae  $ps_1$  (Fig. 8) much



FIGS 1-8.

*Lohmannia vanharteni* sp. n. — 1: dorsal side; 2: seta *ro*; 3: ventral side; 4: genital plate; 5: seta *exp*; 6: seta *c*<sub>3</sub>; 7: seta *d*<sub>1</sub>; 8: seta *ps*<sub>1</sub>.

broader than the other marginal setae (Fig. 6). Transversal bands (fossulae vittiformes) — excepting the first anterior one — short all ending near to insertion point of the inner pairs of notogastral setae ( $d_1$ ,  $e_1$ ).

**Ventral side** (Fig. 3): Sternal apodeme not developed, only a short part visible behind *ap*. 4. All mental and epimeral setae broadened, phylliform, their surface well spinulose; comparatively great differences in their size. Shape of genital and anal plates typical for the genus. Six pairs of genital setae in the inner row (Fig. 4) all slightly dilated, 4 pairs in the outer row, all well dilated, phylliform, surface also spinulose. Anal and adanal setae elongated, similar to notogastral ones, seta  $ad_1$  much wider than the others.

**Material examined**: Holotype: Cabo Verde No. 164; 1 paratype: from the same sample. Holotype deposited in the Muséum d'Histoire naturelle, Geneva and the paratype (983-PO-83) in the Hungarian Natural History Museum, Budapest.

**Remarks**: The new species is well characterized by the phylliform notogastral and nearly round posterior exostigmatal setae. On this basis it stands near to *L. loebli* Mahunka, 1974 and *L. turcmenica* Bulanova-Zachvatkina, 1960. However, the notogastral setae of *L. loebli* are much wider and the setae of the inner row of notogaster scarcely differ from the outer ones. The setae of *L. turcmenica* are much thinner but longer, and setae  $ps_1$  and  $ad_1$  are not dilated as are the other ones.

#### **Hoplophorella lienhardi** sp. n.

**Measurements**. — Length of aspis: 242-273  $\mu\text{m}$ , length of notogaster: 486-527  $\mu\text{m}$ , height of notogaster: 299-324  $\mu\text{m}$ .

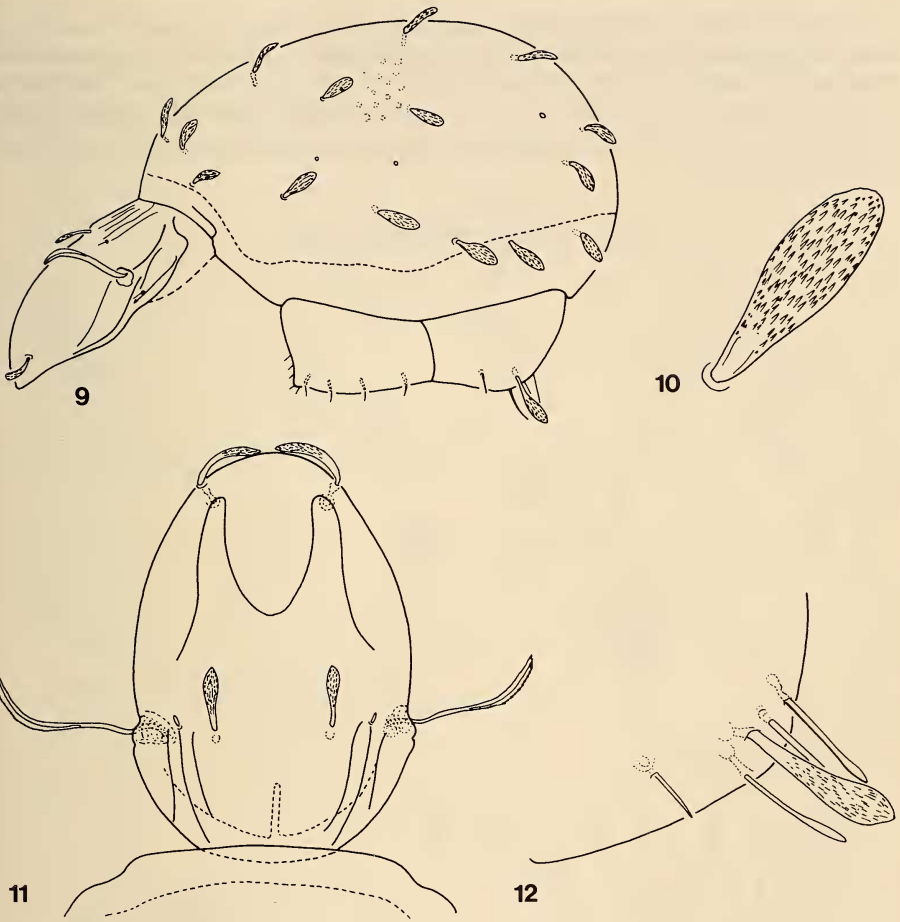
**Aspis** (Fig. 11): Median ridge weakly developed. A sharp lateral carina present on each side. Surface finely punctate, but without foveolae. Three pairs of strong longitudinal laths basally, median ones reaching to insertion points of setae *le*. Rostral setae strongly dilated, curved inwards. Interlamellar setae similar in shape, but directed forwards. Lamellar setae minute, but clearly dilated.

**Notogaster** (Fig. 9): Ornamentation hardly observable, only visible at a certain incidence of light. All setae phylliformly dilated, somewhat spoon-shaped, surface spiculate. Peduncle of setae not well separated (Fig. 10). Seta  $ps_4$  arising in the proximal half of body. Setae  $c_1$  and  $c_2$  originating far from collar margin, setae  $c_3$  arising on it.

**Anogenital region** (Fig. 12): All three pairs of setae in anal position slightly widened at their distal end, all equal in length. Large adanal setae ( $ad_2$ ) well dilated, similar to notogastral ones, surface also spiculate. Anterior adanal setae simple.

**Material examined**: Holotype: Cabo Verde No. 115; 3 paratypes: from the same sample; 4 paratypes: Cabo Verde No. 164. Holotype and 4 paratypes deposited in the Muséum d'Histoire naturelle, Geneva and 3 paratypes (985-PO-83) in the Hungarian Natural History Museum, Budapest.

**Remarks**: The species of the genus *Hoplophorella* Berlese, 1923 may be separated in two groups. One is characterized by the short spiniform rostral setae and the position of setae  $ps_4$  in the posterior part of body. The other group is characterized by the dilated rostral setae which are removed from each other, as well as the more anteriorly placed setae  $ps_4$  in the fore part of the body. The two new species belong to different



FIGS 9-12.

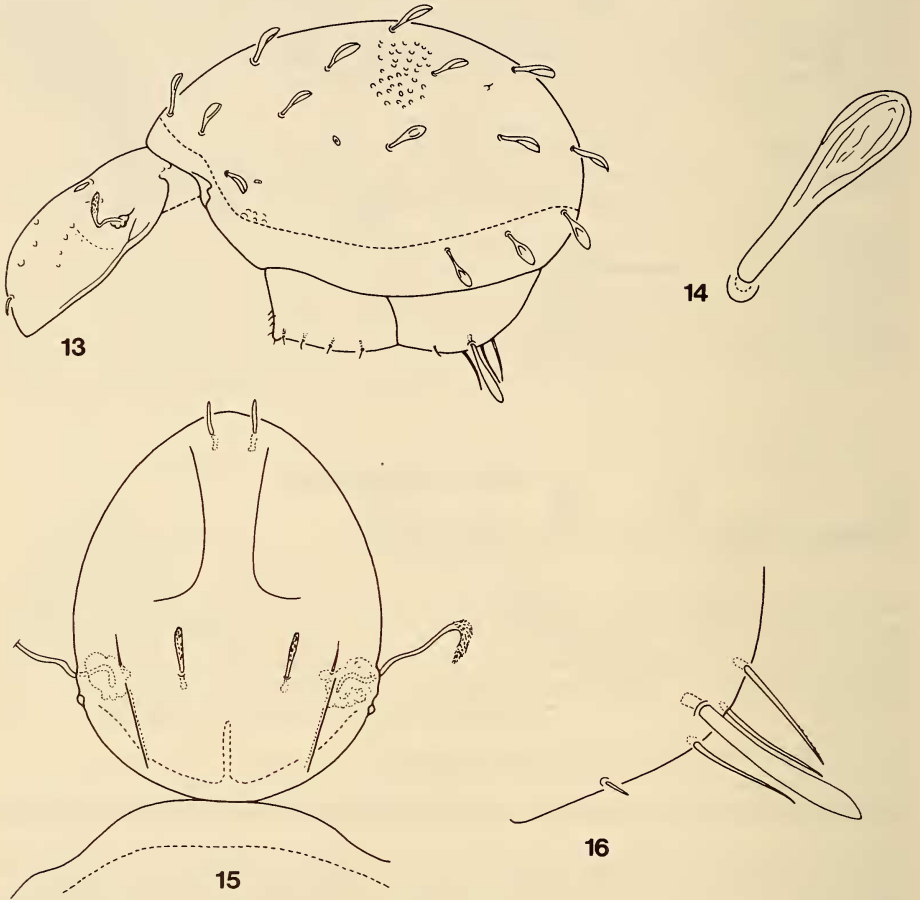
*Hoplophorella lienhardi* sp. n. — 9: lateral side; 10: notogastral seta; 11: aspis; 12: ano-adanal plate.

groups. *Hoplophorella lienhardi* stands near to *H. africana* Wallwork, 1967, described from Tchad. It differs from the latter one by the strong longitudinal crests in the basal region of the aspis and by the fine sculpture of the notogastral setae, not mentioned by WALLWORK. The other new species *H. ligulifera* stands very near to *H. floridae* Jacot, 1933, however, the setae  $ag_1$  of the latter are much thinner basally and has a well-separated peduncle. The shape of sensillus is also different, in *floridae* its surface is only roughened, in the new species it is clearly spinulose.

#### ***Hoplophorella ligulifera* sp. n.**

**Measurements.** — Length of aspis: 183-228  $\mu\text{m}$ , length of notogaster: 371-446  $\mu\text{m}$ , height of notogaster, 213-272  $\mu\text{m}$ .

**A s p i s** (Fig. 15): Median ridge scarcely observable. Surface generally smooth, but some weak foveolae present in the region of median ridge. One pair of strong, longitudinal chitinous lath basally reaching to insertion points of setae *le*. Rostral setae arising near to each other, spiniform, straight. Interlamellar setae slightly dilated, roughened, lamellar ones thin and smooth. Sensillus doubly curved, on its distal end minute spines arranged in longitudinal rows.



FIGS 13-16.

*Hoplohorella ligulifera* sp. n. — 13: lateral side; 14: notogastral seta; 15: aspis; 16: anoadanal plate.

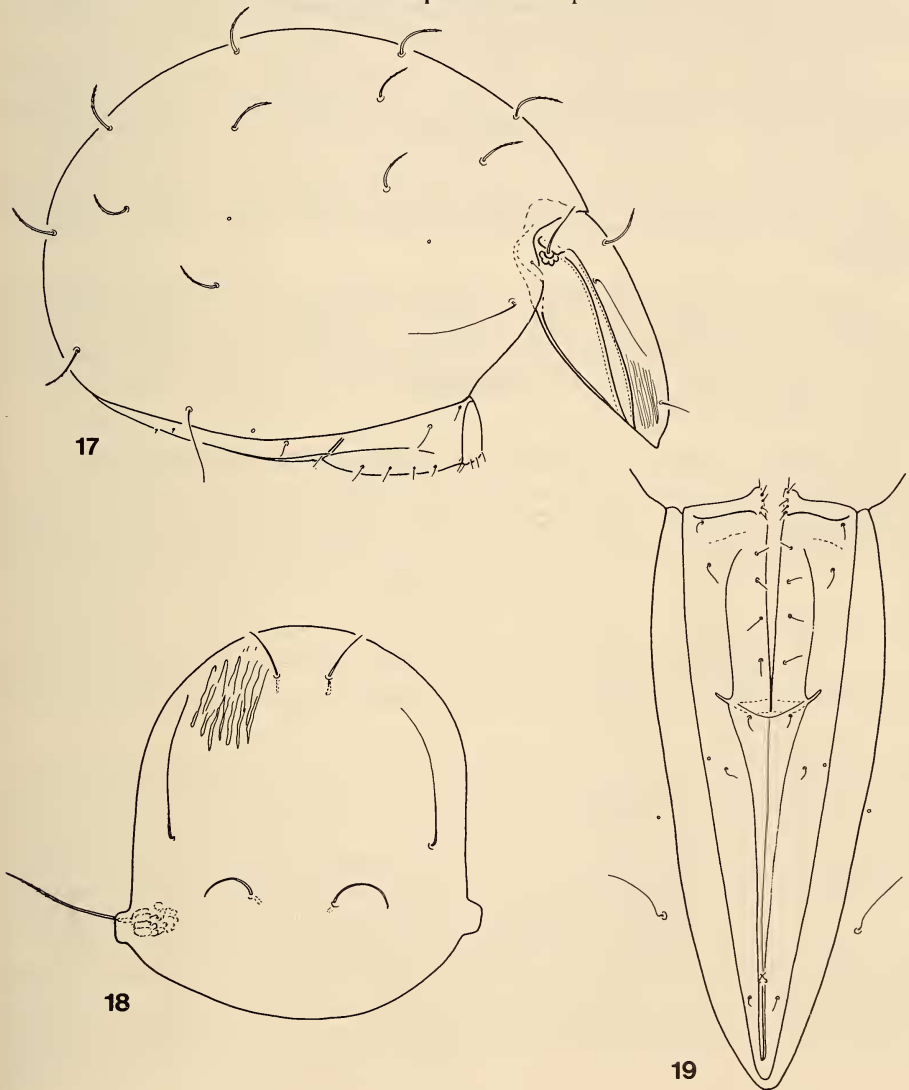
**N o t o g a s t e r** (Fig. 13): Anterior part without elevation or hood. Surface clearly foveolate. Fifteen pairs of spoonshaped notogastral setae (Fig. 14) present, *ps*<sub>4</sub> arising on posterior part of body. Distance of setae *c*<sub>1</sub>, *c*<sub>2</sub> and *c*<sub>3</sub> from collar margin different, *c*<sub>1</sub> arising very near to collar line.

**A n o g e n i t a l r e g i o n** (Fig. 16): Three pairs of setae in anal position, all equal in length and shape, their end not widened. Larger adanal setae (*ad*<sub>2</sub> lanceolate, distally only scarcely wider than basally). Setae *ad*<sub>1</sub> minute, with short spines.

**Material examined:** Holotype: Cabo Verde No. 115; 13 paratypes: from the same sample; 2 paratypes: Cabo Verde No. 83. Holotype and 10 paratypes deposited in the Muséum d'Histoire naturelle, Geneva and 5 paratypes (984-PO-83) in the Hungarian Natural History Museum, Budapest.

**Remarks:** See after the preceding new species.

***Indotritia septentrionalis* sp. n.**



FIGS 17-19.

*Indotritia septentrionalis* sp. n. — 17: lateral side; 18: aspis; 19: anogenital region.



**M e a s u r e m e n t s .** — Length of aspis: 381-436  $\mu\text{m}$ , length of notogaster: 729-867  $\mu\text{m}$ , height of notogaster: 542-648  $\mu\text{m}$ .

**A s p i s** (Fig. 18): Two lateral carinae on each side, both strongly developed. Anterior part of prodorsum finely striated. Rostral setae shorter than interlamellar ones, both pairs rigid, finely ciliate. Lamellar setae smooth, thin, very long, and directed parallel with the surface of prodorsum. Sensillus setiform, with some hardly discernible cilia.

**N o t o g a s t e r** (Fig. 17): Fourteen pairs of notogastral setae present, among them twelve pairs strong, erect and curving forwards, bearing some fine cilia. Two pairs ( $c_3$  and  $ps_3$ ) fine, flagellate and much longer than the others. Setae  $c_3$  longer than  $ps_3$ .

**A n o g e n i t a l r e g i o n** (Fig. 19): Genito-aggenital suture very long, bent inwards, reaching to insertion points of setae  $g_4$  and ending before setae  $ag_2$ . Nine pairs of genital, 2 pairs of aggenital, 2 pairs of anal and 2 pairs of adanal setae present.

**M a t e r i a l e x a m i n e d** : Holotype: Cabo Verde No. 115; 4 paratypes: from the same sample. Holotype and 2 paratypes deposited in the Muséum d'Histoire naturelle, Geneva and 2 paratypes (986-PO-83) in the Hungarian Natural History Museum, Budapest.

**R e m a r k s** : The new species is well characterized by the extremely long lamellar setae and the two pairs of thin, fine setae of the notogaster. On this basis it is well distinguished from all related taxa. Also very characteristic is the length of the aggenito-genital suture, which in *I. consimilis* Märkel, 1964 is much shorter and ending before the insertion points of setae  $ag_1$ .

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